City of Santa Monica®

Information Item

Date: May 13, 2015

To: Mayor and City Council

From: Edward F. King, Director of Transit Services (BBB)

Subject: Redeem™ by Clean Energy®, Fueling a Renewable Future One Bus at a Time – Presentation

Introduction

Big Blue Bus has been fueling its Liquefied Natural Gas and Compressed Natural Gas fleet of motor coaches with Liquefied Natural Gas supplied by Clean Energy®, a California Corporation since 2012.

On January 12, 2015, the City and Clean Energy® modified its original agreement to include the supply of Liquefied Natural Gas or Renewable Liquefied Natural Gas known as Redeem™. Renewable Liquefied Natural Gas is non-fracked methane harvested from organic waste in landfills. The process of harvesting and processing Renewable Methane Gas provides a product that has fewer impurities than conventional Natural Gas and thus is a cleaner burning fuel source.

The City of Santa Monica is a nationally recognized leader for its sustainability policies and actions. BBB has progressively contributed to the City's sustainability narrative through its use of alternative fuel and ultimate phasing out of diesel-fueled motor coaches. As of January 12, 2015, BBB's entire fleet of motor coaches is powered by clean burning and Renewable Natural Gas.

The modification to the original agreement with Clean Energy to furnish and deliver Renewable Methane Gas, as a replacement for traditional Liquid Natural Gas, is cost neutral to the City.

Discussion

The Environmental Protection Agency (EPA) sets the Carbon Intensity (CI) for each fuel type. The CI number is the measurement of energy used to produce, process, deliver and consume fuel. It is the measurement of how clean the fuel is for the environment; the lower the CI number, the lower the greenhouse gas emissions released when burning the fuel.

The Renewable Natural Gas Big Blue Bus is using to power its fleet of 189 buses has a CI value of 29.71, compared to Ultra-Low Sulfur Diesel of 97.05 or Compressed Natural Gas (CNG) of 66.25. Big Blue Bus is using Natural Gas that is 55% cleaner for the environment than CNG that is derived from less sustainable methods.

Renewable Liquefied Natural Gas, Redeem™, is non-fracked methane, harvested locally from landfills. This gas has historically been burned off in to the atmosphere. However, with advances in renewable technology, the gas is now harvested through a series of membranes implanted in the ground of landfills. Renewable Methane Gas is processed through a filtration and refining process and transported via pipeline to end users. As a result of the harvesting and filtration process, it is found that Renewable Methane Gas has fewer impurities than conventional Natural Gas and thus is a cleaner burning fuel source. Operating City transit buses through this waste-to-energy fuel source, Big Blue Bus contributes to fulfilling the City's commitment to protecting the environment by using the cleanest transportation fuel available.

The addition of Redeem™ is a next step in BBB's and the City's sustainability portfolio. BBB will promote its use of Redeem™ through a bus advertising campaign to include a press release, printed filler materials at bus stops, social media and bus exterior advertising. In addition, Clean Energy®, the supplier of BBB's clean fuel sources, will promote the addition of Redeem™ through its media outlets and online marketing tools. A sample of the creative material is attached.

The Redeem™ Renewable Liquefied Natural Gas is at cost parity to the City. There is no financial impact to the City.

Prepared By: Suja Lowenthal, Transit Government and Community Relations Manager

Attachment - Redeem™ Statistics and Bus Advertising Art

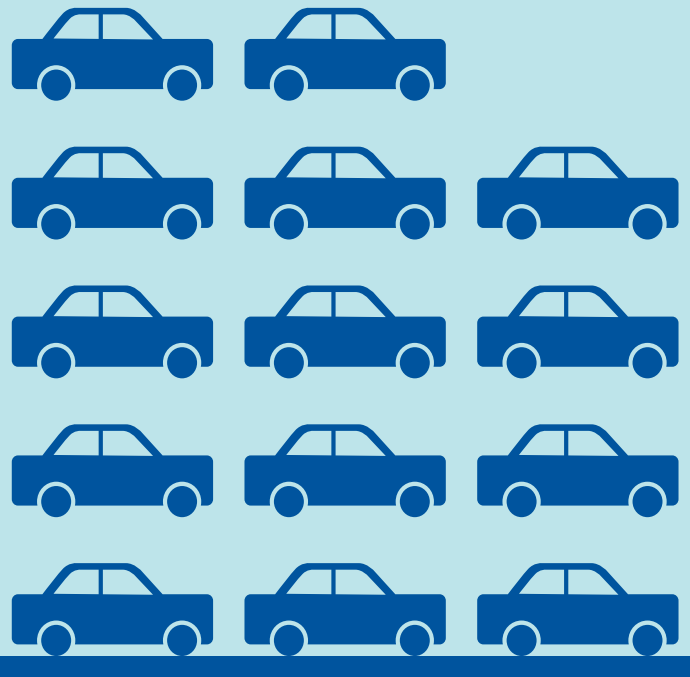
Reducing Pollution in Santa Monica Neighborhoods

189
Redeem™
Fueled Buses

30,687
Miles Driven
Per Bus

Eliminates
Nearly
8,000
Tons of CO^2
Emissions
Every Year

The Same
As Removing
2,600
Cars From
LA Traffic



Or Planting
320,000
New Tree Seedlings

Fueled by
Redeem™
by Clean Energy®
redeem.cleanenergyfuels.com